WHAT IS CLAIMED IS:

- 1 1. An electrode-rolled battery in which an anode and a
- 2 cathode are rolled in a manner that a separator is put between
- 3 said anode and said cathode and in which a plurality of collecting
- 4 tabs is respectively provided with a plurality of anode active
- 5 material unformed parts of said anode and a plurality of cathode
- 6 active material forming parts of said cathode; and
- 7 wherein when a length of an outermost anode active material
- 8 unformed part is set as "L"; and when a distance from said outermost
- 9 anode active material unformed part to a center of a rolled body
- 10 made up of said anode, said cathode and said separator, is set
- 11 as "R", a following expression is set:
- 12 $L \ge 2\pi R$.
 - 1 2. The electrode-rolled battery according to Claim 1,
- 2 wherein each of said collecting tabs is arranged regularly on an
- 3 end face of said rolled body.
- An electrode-rolled battery in which an anode and a
- 2 cathode are rolled in a manner that a separator is put between
- 3 said anode and said cathode and in which a plurality of collecting
- 4 tabs is respectively provided with a plurality of anode active
- 5 material unformed parts and a plurality of cathode active material
- 6 forming parts; and
- 7 wherein when a length of an outermost anode active material
- 8 unformed part is set as "L"; and when a distance from said outermost
- 9 anode active material unformed part to a center of a rolled body
- 10 made up of said anode, said cathode and said separator, is set
- 11 as "R", when a deviation between a start point of said outermost

- 12 anode active material unformed part and a start point of a
- 13 outermost cathode active material forming part which is opposite
- 14 to said outermost anode active material unformed part is set as
- " α ", and when a deviation between an end point of said outermost
- 16 anode active material unformed part and an end point of said
- 17 outermost cathode active material forming part which is opposite
- 18 to said outermost anode active material unformed part is set as
- 19 " β ", a following expression is set:
- $L = 2\pi R + \alpha + \beta.$
 - 1 4. The electrode-rolled battery according to Claim 3,
- 2 wherein each of said collecting tabs is arranged regularly on an
- 3 end face of said rolled body.
- 1 5. An electrode-rolled battery comprising:
- 2 an anode having a first band-shaped electrode and
- 3 intermittently having anode active material forming parts on both
- 4 sides of said first band-shaped electrode in a longitudinal
- 5 direction;
- 6 a cathode having a second band-shaped electrode and
- 7 intermittently having cathode active material forming parts on
- 8 both sides of said first band-shaped electrode in a longitudinal
- 9 direction;
- a plurality of first collecting tabs formed in said anode
- 11 active material forming parts of said first band-shaped
- 12 electrode;
- a plurality of second collecting tabs formed in said cathode
- 14 active material unformed parts of said second band-shaped
- 15 electrode; and
- 16 a separator put between said cathode and said anode;

said electrode-rolled battery in which said anode, said cathode and said separator are rolled; and

wherein when a length of an outermost anode active material 19 20 unformed part is set as "L"; and when a distance from said outermost anode active material unformed part to a center of a rolled body 21 22 made up of said anode, said cathode and said separator, is set 23 as "R", when a deviation between a start point of said outermost 24 anode active material unformed part and a start point of a outermost cathode active material forming part which is opposite 25 to said outermost anode active material unformed part is set as 26 " α ", and when a deviation between an end point of said outermost 27 28 anode active material unformed part and an end point of said outermost cathode active material forming part which is opposite 29 to said outermost anode active material unformed part is set as 30 " β ", a following expression is set: 31

32 $L \ge 2\pi R$.

- 1 6. The electrode-rolled battery according to Claim 5, 2 wherein each of said collecting tabs is arranged regularly on an 3 end face of said rolled body.
- 7. An electrode-rolled battery comprising:
- an anode having a first band-shaped electrode and intermittently having anode active material forming parts on both sides of said first band-shaped electrode in a longitudinal direction;
- a cathode having a second band-shaped electrode and intermittently having cathode active material forming parts on both sides of said second band-shaped electrode in a longitudinal direction;

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a plurality of first collecting tabs formed in said anode active material forming parts of said anode;

a plurality of second collecting tabs formed in said cathode active material unformed parts of said cathode; and

a separator put between said cathode and said anode:

said electrode-rolled battery in which said cathode, said anode and said separator are rolled; and

wherein when a length of an outermost anode active material unformed part is set as "L"; and when a distance from said outermost anode active material unformed part to a center of a rolled body made up of said anode, said cathode and said separator, is set as "R", when a deviation between a start point of said outermost anode active material unformed part and a start point of a outermost cathode active material forming part which is opposite to said outermost anode active material unformed part is set as " α ", and when a deviation between an end point of said outermost anode active material unformed part and an end point of said outermost cathode active material forming part which is opposite to said outermost anode active material forming part which is opposite to said outermost anode active material unformed part is set as " β ", a following expression is set:

 $L = 2\pi R + \alpha + \beta.$

- 1 8. The electrode-rolled battery according to Claim 7, 2 wherein each of said collecting tabs is arranged regularly on an 3 end face of said rolled body.
- 9. A method of manufacturing an electrode-rolled battery in which an anode and a cathode are rolled in a manner that a separator is put between said anode and said cathode and in which a plurality of collecting tabs is respectively provided

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- 5 with a plurality of cathode active material unformed parts and
- 6 a plurality of anode active material forming parts; and
- 7 wherein when a length of an outermost anode active material
- 8 unformed part is set as "L"; and when a distance from said outermost
- 9 anode active material unformed part to a center of a rolled body
- 10 made up of said anode, said cathode and said separator, is set
- 11 as "R", a following expression is set:
- 12 $L \ge 2\pi R$.
 - 1 10. The method according to Claim 9, wherein each of said
 - 2 collecting tabs is arranged regularly on an end face of said rolled
- 3 body.
- 1 11. A method of manufacturing an electrode-rolled
- 2 battery in which an anode and a cathode are rolled in a manner
- 3 that a separator is put between said anode and said cathode and
- 4 in which a plurality of collecting tabs is respectively provided
- 5 with a plurality of anode active material unformed parts and a
 - plurality of cathode active material forming parts; and
- 7 wherein when a length of an outermost anode active material
- 8 unformed part is set as "L"; and when a distance from said outermost
- 9 anode active material unformed part to a center of a rolled body
- 10 made up of said anode, said cathode and said separator, is set
- 11 as "R", when a deviation between a start point of said outermost
- 12 anode active material unformed part and a start point of a
- 13 outermost cathode active material forming part which is opposite
- 14 to said outermost anode active material unformed part is set as
- 15 " α ", and when a deviation between an end point of said outermost
- 16 anode active material unformed part and an end point of said
- 17 outermost cathode active material forming part which is opposite

- 18 to said outermost anode active material unformed part is set as
- 19 " β ", a following expression is set:
- $L = 2\pi R + \alpha + \beta.$
 - 1 12. The method according to Claim 11, wherein each of said
 - 2 collecting tabs is arranged regularly on an end face of said rolled
 - 3 body.
- 1 13. A method of manufacturing an electrode-rolled
- 2 battery comprising:
- 3 an anode forming process of forming an anode by
- 4 intermittently forming anode active material forming parts on
- 5 both sides of a first band-shaped electrode in a longitudinal
- 6 direction;
- 7 a cathode forming process of forming a cathode by
- 8 intermittently forming cathode active material forming parts on
- 9 both sides of a second band-shaped electrode in a longitudinal
- 10 direction;
- 11 a connecting process of connecting a plurality of first
- 12 collecting tabs to anode active material unformed parts of said
- 13 first band-shaped electrode and of connecting a plurality of
- 14 second collecting tabs to cathode active material unformed parts
- 15 of said second band-shaped electrode;
- 16 a rolling process of rolling said cathode and said anode,
- and a separator which is put between said cathode and said anode;
- a first tab gathering process of gathering each of said first
- 19 collecting tabs;
- a header connecting process of connecting a collecting
- 21 header to said first collecting tabs which are gathered;
- a second tab gathering process of gathering each of said

- 23 second collecting tabs;
- an electrolyte injecting process of injecting electrolyte
- 25 into said rolled body using an electrolyte injecting apparatus:
- wherein when a length of an outermost anode active material
- 27 unformed part is set as "L"; and when a distance from said outermost
- 28 anode active material unformed part to a center of a rolled body
- 29 made up of said anode, said cathode and said separator, is set
- 30 as "R", a following expression is set:
- 31 $L \ge 2\pi R$.
 - 1 14. The method according to Claim 13, wherein each of said
 - 2 collecting tabs is arranged regularly on an end face of said rolled
- 3 body.
- 1 15. A method of manufacturing an electrode-rolled
- 2 battery comprising:
- 3 an anode forming process of forming an anode by
- 4 intermittently forming anode active material forming parts on
- 5 both sides of a first band-shaped electrode in a longitudinal
- 6 direction;
- 7 a cathode forming process of forming a cathode by
- 8 intermittently forming cathode active material forming parts on
- 9 both sides of a second band-shaped electrode in a longitudinal
- 10 direction:
- a connecting process of connecting a plurality of first
- 12 collecting tabs to anode active material unformed parts of said
- 13 first band-shaped electrode and of connecting a plurality of
- 14 second collecting tabs to cathode active material unformed parts
- 15 of said second band-shaped electrode;

a rolling process of rolling said cathode and said anode,

17 and a separator which is put between said cathode and said anode;

a first tab gathering process of gathering each of said first

19 collecting tabs;

20 a header connecting process of connecting a collecting

21 header to said first collecting tabs which are gathered;

a second tab gathering process of gathering each of said

23 second collecting tabs;

24 an electrolyte injecting process of injecting electrolyte

25 into said rolled body using an electrolyte injecting apparatus:

wherein when a length of an outermost anode active material

27 unformed part is set as "L"; and when a distance from said outermost

28 anode active material unformed part to a center of a rolled body

29 made up of said anode, said cathode and said separator, is set

30 as "R", when a deviation between a start point of said outermost

31 anode active material unformed part and a start point of a

32 outermost cathode active material forming part which is opposite

33 to said outermost anode active material unformed part is set as

 α ", and when a deviation between an end point of said outermost

35 anode active material unformed part and an end point of said

36 outermost cathode active material forming part which is opposite

37 to said outermost anode active material unformed part is set as

38 " β ", a following expression is set:

 $L = 2\pi R + \alpha + \beta.$

1 16. The method according to Claim 15, wherein each of said

2 collecting tabs is arranged regularly on an end face of said rolled

3 body.